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ABSTRACT

The reading clinic at Eastern Montana College uses preservice elementary and special education teachers to provide remedial tutoring to elementary reading disabled students. The program is centered on the motivating force of success with emphasis on the academic task of reading. Tutors adapt instruction to strengths and weaknesses of students. A wide variety of techniques are used to remediate oral accuracy and oral reading fluency, sight word vocabulary, and comprehensions and study skills. Case study evaluation of students (5-9 years old) attending the clinic was summarized to identify particular methods that appeared to effect reading growth in comprehension, readng rate, decoding strategies, word recognition, oral reading fluency, and use of syntax to predict meaning. Intervention strategies were characterized by extensive student-teacher interaction. Approaches that resulted in the highest overall gain scores required student self-evaluation and monitoring. (CL)

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INSTRUCTIONAL INTERVENTION THAT WORKS:

Case Study Research

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Instructional intervention for children who have reading difficulties is the bridge between regular classroom performance and total failure as a student. Realizing that intervention often is only at best a bandaide to instruction, the ultimate goal of remediation is a reader who can survive the rigors of the educational system. Within these demands, successful intervention programs are associated with a high quality of instruction that is based on continuous evaluation of reading behaviors. These evaluations help to identify particular instructional techniques the teacher can utilize with a high likelihood of positive results. Thus, by necessity, effective reading instruction reflects a pattern of teaching strategies that are related to reading behaviors rather than one single intervention program (McDonald, 1976). Within the field of reading, a wealth of instructional strategies can be implemented to remediate inefficient reading behaviors. The appropriateness of each intervention strategy for a particular student can be identified through diagnosis and obeservation. Research suggests that for the primary grades the use of a variety of instructional materials based on accurate diagnosis increases the effectiveness of reading instruction (Rupley and Blair, 1978). These basic principles of intervention programs are incorporated in the reading clinic at Eastern Montana College.

The reading clinic at Eastern Montana College provides a center for preservice training of elementary education and special education majors. Functioning as a referral base for elementary students from nearby area schools and the communities in central Montana, the clinic provides remedial tutoring in reading. Elementary students accepted for tutoring

by the clinic receive about twenty hours of one-to-one tutoring under close supervision by college personnel.

The reading clinic maintains that success is the greatest motivating factor in learning to read. The initial diagnosis using a published informal reading inventory determines an appropriate instructional reading level for each student. Schneider (1979) has found that a balance of high success reading and medium success reading tasks result in higher student achievement. Thus, the level of reading material is validated by informal reading evaluations from instructional material. Concurrent to evaluation of performance reading level, the strengths and weaknesses of each student are identified. Subsequently, material is chosen that maximizes success based on learner strengths, styles and performance level. Specific methods are chosen to remediate the identified weaknesses of each student. This success approach to instruction is incorporated in a four-phased remedial session. First, each session begins with a directed reading-thinking activity using material that reflects instructional reading. The student usually has little difficulty in word identification or comprehension during this phase of the remedial session. The selection is also of sufficient length to allow for comprehension of story plot and character development; however, it is short enough to provide a sense of closure for the reader. Secondly, within the session a variety of short activities are planned using specialized methods to develop and modify reading skills and reading strategies. Third, each session contains an ongoing, informal evaluation to identify patterns of reading behaviors and monitor reading performance. In the fourth phase of the program students are

engaged in at least five minutes of sustained silent reading. The teaching focus at the Eastern Montana College Reading Clinic is on the academic task of reading and each student spends about sixty percent of each hour reading contextual material.

Following the structured plan, the tutors differentiate instruction to the strengths and proficiencies of the reading while incorporating specialized techniques to remediate weaknesses. For example, a student who had a limited ability to deal with oral language, participated in an extended vocabulary development program and direct experiences with the prerequisite concepts which were necessary to read a particular selection with understanding. Thus, the directed reading-thinking activity required an exceptional amount of time for the introduction of semantic vocabulary. However, those students who experienced little difficulty with semantic vocabulary, but extreme difficulty with oral accuracy, spent more time on word identification and fluency and less time on developing word meanings.

Although the remedial session is not focused on specialized remedial techniques, a few of these techniques produced rapid gains in student achievement during the twenty hours of instruction. To remediate oral accuracy and oral reading fluency, the techniques of alternate readings, neurological impress, repeated readings, and readers theatre are used. Alternate readings is a form of modeling appropriate oral reading fluency where the clinician and student alternate reading paragraphs while the clinician models appropriate phrasing, intonation, pitch and stress. In the neurological impress method the tutor and student read aloud together with the clnician reading louder and

slightly faster then the student. The clinician reads into the right ear while pointing to the line of print being read. Repeated readings is a method of re-reading meaningful, self-selected passages until speed and oral accuracy are satisfactory. After each reading different comprehension questions are answered. Reader's theatre focuses on oral reading fluency and expression by reading play scripts. The clinician provides a model for the student.

The techniques of word games, word banks, and Fernald techniques are used to reinforce sight word vocabulary. Word games include activities such as word concentration, word bingo, word fish that make a game of learning sight words. Word banks include a set of word flash cards taken from the child's reading vocabulary. The Fernald technique is a multisensory technique that involves tracing and writing the difficult words as they are said.

A variety of specialized techniques to improve comprehension and study skills are also employed for those students using inappropriate strategies. Semantic feature analysis are used to capitalize on the reader's prior knowledge to increase semantic vocabulary. In this approach the student uses a grid to classify salient features of vocabulary words. A subskills approach to comprehension using the Barnell-Loft specific skill series is used to remediate deficiences in identifying the main idea, drawing conclusion, etc. The recipricol questioning technique developed by Manzo is used to increase prediction strategies. In this approach the clinician models questioning strategies, then the student questions the clinician. Semantic webs are also used to increase comprehension and semantic vocabularies. This process

requires an interaction between student and teacher to construct a visual array of story characters and ideas producing a graphic representation of story cohesion based on personal knowledge and story content. Another comprehension technique is the Herringbone techinque where the student answered Who, Did What, When, Where, How, and Why questions on a visual representation. The traditional method of studying using the strategy of survey, question, read, recite and review sequence is also used to improve comprehension of content area texts. For some students the understanding of how syntax effects comprehension is developed using the cloze technique and sentence combining. With the cloze technique the student must predict words that have been related from an extended passage. The sentence combining technique requires students to combine kernal sentences in multiple ways. Purpose setting and creative writing are also used to increase comprehension.

Compiling Case Study Data

The data reported in this study serves as a survey of intervention technique used in the Reading Clinic at Eastern Montana College. Each remedial case study was analyzed to identify the major concern inhibiting reading achievement. These concerns were recorded with the accompanying pre and post test scores on published informal reading inventories. Gain scores were then computed for each case study. This information was collected for all students ranging in age from five to nine years old, who attended the Reading Clinic at Eastern Montana College during Spring, Summer and Fall quarters of 1982. These data were then summarized to identify with particular remedial methods appearing to effect reading growth. Eight techniques were used by forty percent of

the clinicians during the twenty hours of remedial instruction (see table 1).

TABLE I

INTERVENTION USED BY FORTY PERCENT OF CLINICIANS

INTERVENTION	AVERAGE GAIN SCORES*
Repeated Readings	1.0
Play Readings	.60
Language Experience	.72
Timed Readings	1.0
Cloze	.90
Neurological Impress Method	.76
Flash Cards	.68
Progress Charts	1.0

*Gain Scores were computed from pre-post informal reading inventories.

One characteristic of the intervention strategies involves extensive student-teacher interaction. This allows for a reality approach to remediation, where reading strategies, rather than simple knowledge of right or wrong answers, can be discussed. The second interesting characteristic of these techniques is that the majority of the techniques were used in the contextual setting rather than with isolated words or letters. Our analysis concurs with Wilson (1981) who maintains that reading behaviors are more appropriately remediated in terms of contextual print.

Of these eight strategies utilized, repeated readings, timed read-

ings and progress charts resulted in the highest overall gain scores. One characteristic of these methods is that each technique required that the student be aware of his progress and chart that progress at each instructional section. This charting activity concretely demonstrates the student's response to reading material, Some research does support the fact that inefficient readers are not aware of their own progress and self-correct less frequently than able readers (Allington, 1977). These methods provide a vehicle for enabling the reader to monitor his/her success with his/her own reading strategies. At the same time, these intervention techniques allow the tutor and student to talk about strategies to use to increase reading proficiency. Specific areas of concern were identified for each case study and appropriate intervention techniques were employed.

To remediate comprehension difficulties, clinicians used fifteen different intervention strategies (See Table II). Of these strategies, the Specific Skill Series produced the most consistent reading gain scores across all the case studies. Other techniques that proved successful were the language experience approach, purposeful reading, timed readings, and reader's theatre. The fact that oral reading techniques improved silent reading comprehension needs to be further investigated in a more systematic fashion. These oral reading techniques, perhaps serve the purpose of bringing covert reading behaviors to the overt attention of both the reader and the clinician.

To remediate inefficient reading rate, twenty-three different intervention techniques were used in a variety of case studies (See Table III). The most successful techniques for inefficient rate were timed

readings and charting progress. These two intervention strategies have been used throughout remedial instruction with success.

To remediate the inappropriate decoding strategies, sixteen different intervention techniques were employed (See Table IV). However, the most successful of these techniques were the cloze technique and the repeated readings. Again these techniques involved contextual application of phonic principles rather than isolated drill of specific phonic rules.

To develop rapid recognition of words at sight twenty nine different intervention strategies were used (See Table V). Of these the most successful intervention techniques for the most case studies were repeated readings, the language experience approach and flash cards. These techniques all involve at least three repititions of new sight words. The language experience and the repeated readings were in context while the flash cards represented isolated drill. However, both the repeated readings and the flash cards used graphing of daily progress to illustrate the student's improvement.

Involving only six case studies, utilizing appropriate intonation, stress, pitch and phrasing to convey meaning, oral reading fluency was remediated by a variety of techniques (See Table VI). Modeling oral reading behavior was the most successful intervention strategy for this concern, while timed readings proved the least successful.

For those students who were inefficient at using syntax to predict meaning, the intervention techniques of cloze procedure, creative writing and sentence combining proved successful (See Table VII). Four of the case studies indicated that the students displayed visual track-

ing difficulties (See Table VIII). A variety of techniques were used to remediate this concern; however, no intervention program resulted in an increase in reading performance.

In summary, a variety of techniques have been used in the reading clinic at Eastern Montana College. Some of these techniqes have proved more successful than others; however, none of the case studies were conducted under rigorous experimental design. It is necessary for clincians to begin collating the data from individual case studies in order to evaluat ethe effectiveness of the intervention programs. Our intervention program based on the directed reading-thinking activity differentiated according to learner strengths and weaknesses, is working, however the effectiveness of the time spend in direct instruction could be increased if the precise intervention techniques for each areas of concern were delineated.

TABLE II

CONCERN: COMPREHENSION
NUMBER OF CASE STUDIES: 11

INTERVENTION	PERCENT OF CASE STUDIES EMPLOYING TECHNIQUE	AVERAGE GAIN SCORES
Barnell Loft	55	1.08
Cloze	27	1.0
Creative writing	9	1.5
Flashcards	18	1.0
Herringbone	9	1.0
Language experience	36	1.12
NIM	27	1.0
Playreading	27	1.17
Progress chart	36	1.0
Purposeful reading	18	1.25
Sentence combining	18	1.0
Semantic mapping	9	1.0
SRA	9	1.0
Timed readings	18	1.25
Word bank	18	1.0

TABLE III

CONCERN: RATE GAIN SCORES FOR CASE STUDIES

NUMBER OF CASE STUDIES: 26

INTERVENTION	PERCENT OF CASE STUDIES EMPLOYING TECHNIQUE	AVERAGE GAIN SCORES
Alternate reading	8	1.0
Barnell Loft	4	1.0
Cloze	27	.92
Creative writing	8	1.5
Flashcards	38	.55
Glass analysis	4	0.0
Herringbone	4	1.5
Language experience	46	.87
NIM	42	.64
Repated readings	31	.94
Play reading	35	.55
Progress chart	35	1.5
Request	4	.5
Rhebus	4	0.0
Semantic mapping	12	.66
SQ3R	4	1.5
Sentence combining	19	1.2
Story cards	4	0.0
Timed reading	35	1.5
Word bank	19	.80
Word games	16	.50
Work book	4	1.5
Work sheet	4	1.0

TABLE IV

CONCERN: DECODING GAIN SCORES FOR CASE STUDIES

NUMBER OF CASE STUDIES: 12

INTERVENTION	PERCENT OF CASE STUDIES EMPLOYING TECHNIQUE	AVERAGE GAIN SCORES
Cloze	16	1.34
Creative writing	5	1.5
Flashcards	26	.5
Glass analysis	5	0.0
Language experience	58	.71
Modeling	5	1.5
NIM	26	1.0
Play reading	16	.83
Progress chart	16	1.17
Repeated readings	21	1.25
Sentence combining	16	.83
Story cards	5	0.0
Timed readirgs	16	1.34
Word games	26	.50
Workbook	16	.50
Worksheet	16	.67

TABLE V

CONCERN: WORD RECOGNITION GAIN SCORES FOR CASE STUDIES

NUMBER OF CASE STUDIES: 19

INTERVENTION	PERCENT OF CASE STUDIES EMPLOYING TECHNIQUE	AVERAGE GAIN SCORES
Alternate readings	5	.5
Barnell Loft	5	.5
Board work	5	0.0
Cloze	5	1.5
Creative writing	5	1.5
Fernald	5	0.0
Flashcards	53	.45
Language experience	37	.58
NIM	37	.43
Repeated readings	26	.90
Play readings	26	.50
Progress charts	16	1.0
Sentence combining	16	.34
Semantic feature analysis	11	.25
Semantic mapping	5	1.0
Timed reading	5	1.5
Wordbank	21	.62
Word games	32	.44
Workbook	11	.75
Worksheet	21	.37

TABLE VI

CONCERN: FLUENCY

NUMBER OF CASE STUDIES: 6

INTERVENTION	PERCENT OF CASE STUDIES EMPLOYING TECHNIQUE	AVERAGE GAIN SCORES
Alternate readings	33	1.0
Barnell Loft	17	.5
Cloze	17	0.00
Flashcards	50	.5
Language experience	17	.5
NIM	83	.7
Modeling	17	1.5
Play reading	50	.67
Progress chart	17	.5
Repeated readings	33	1.0
Timed readings	17	.0
Word games	33	1.0
Word bank	33	1.0

TABLE VII

CONCERN: SYNTAX USE

NUMBER OF CASE STUDIES: 4

INTERVENTION	PERCENT OF CASE STUDIES EMPLOYING TECHNIQUE	AVERAGE GAIN SCORE
Cloze	50	1.5
Creative writing	25	1.5
Flashcards	25	1.5
Language experience	75	1.0
NIM	25	1.0
Play reading	25	.5
Progress chart	50	1.25
Repeated readings	50	1.0
Sentence combining	25	1.5
Timed reading	50	1.0

TABLE VIII

CONCERN: VISUAL TRACKING

NUMBER OF CASE STUDIES: 4

INTERVENTION	PERCENT OF CASE STUDIES EMPLOYING TECHNIQUES	AVERAGE GAIN SCORE
Boardwork	25	0.0
Cloze	25	0.0
Fernald	25	0.0
Flashcards	75	0.0
Glass anaylsis	25	0.0
Language experience	50	0.0
NIM	50	0.0
Play reading	25	0.0
Progress charts	25	0.0
Rhebus	25	0.0
Story cards	25	0.0
Timed reading	25	0.0
Workbook	25	0.0
Worksheet	25	0.0

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